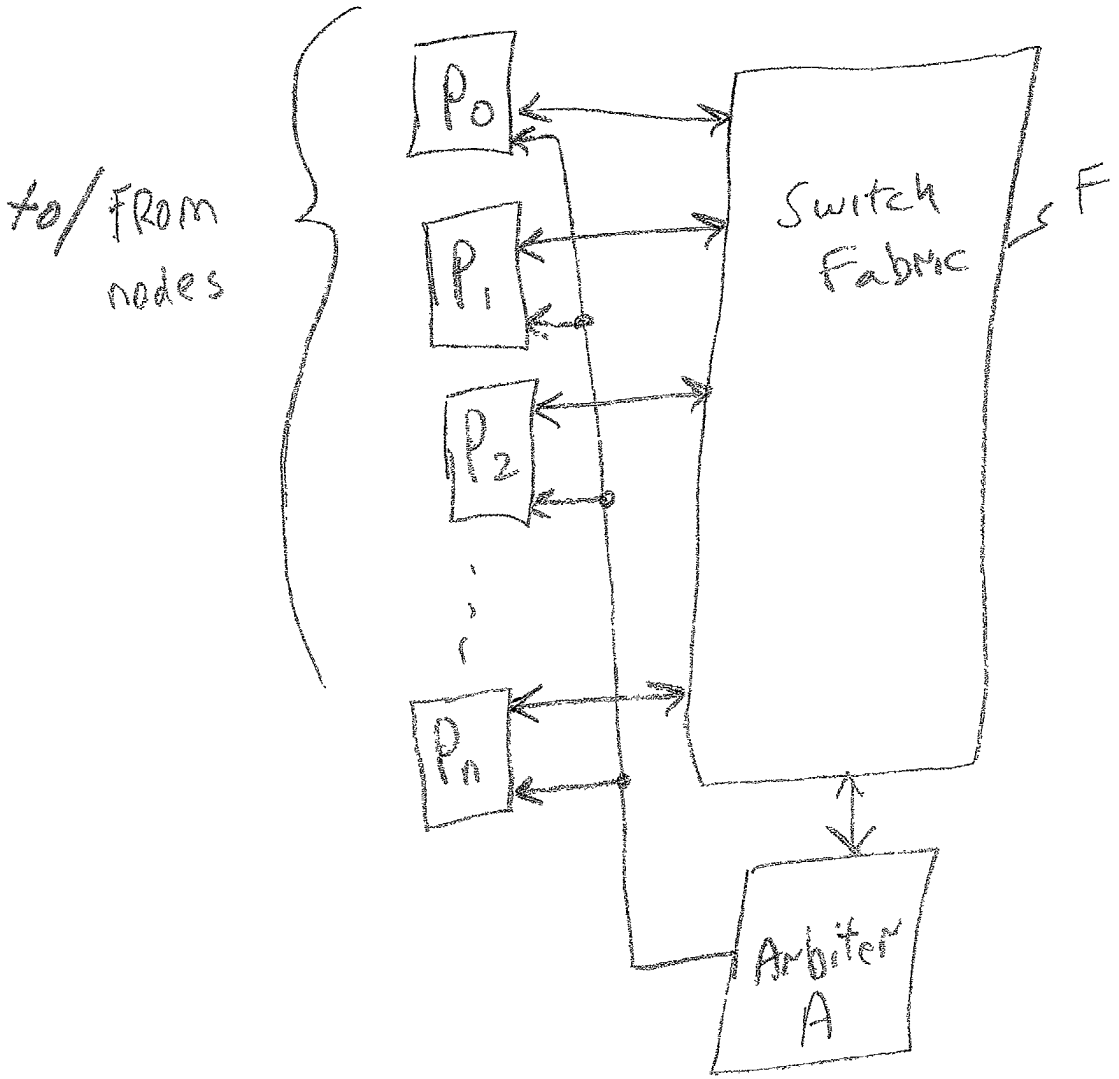

Fig. 1
(prior art)

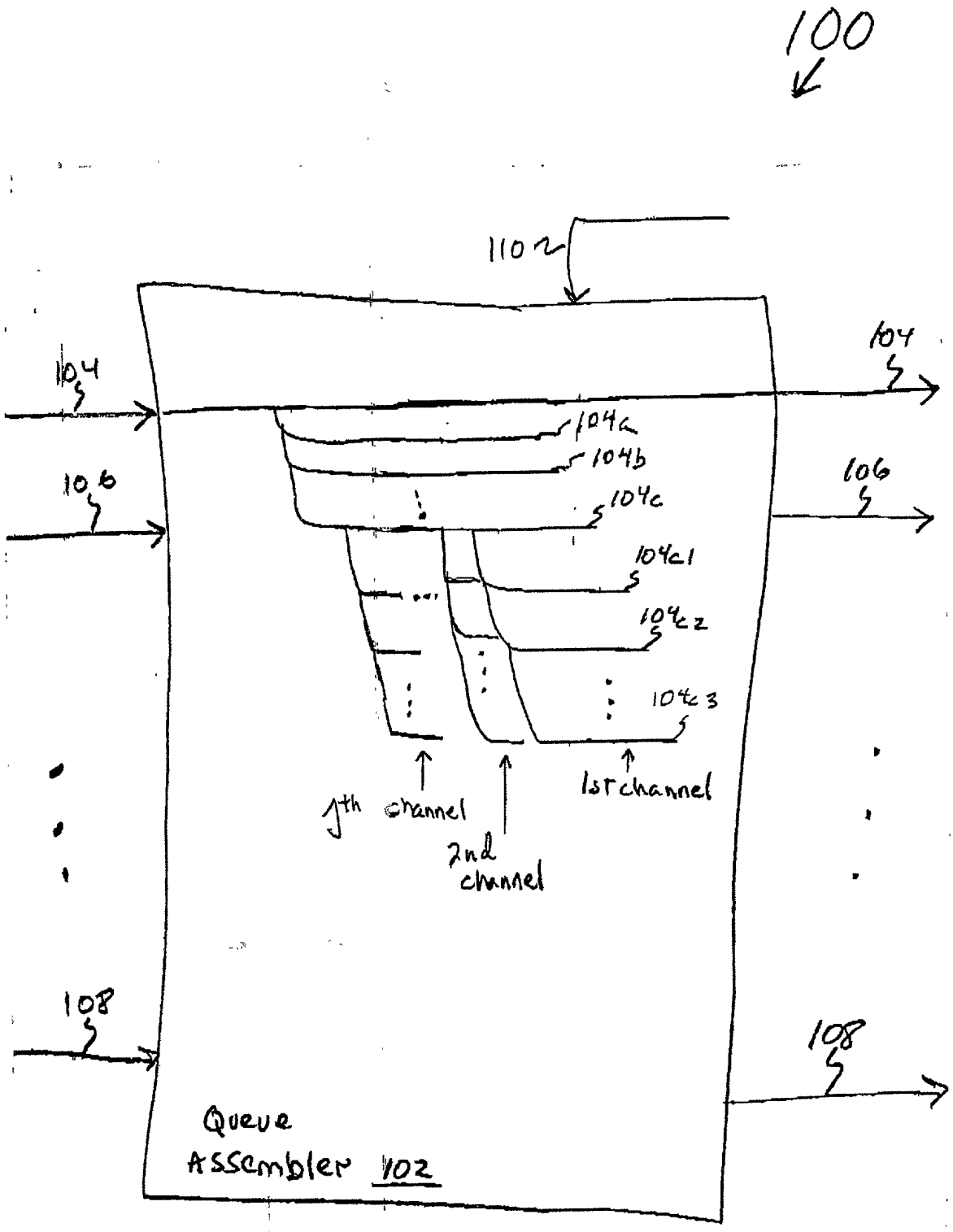
100
110
104
104
104a
104b
106
106
104c
104c1
104c2
104c3
1st channel
2nd channel
jth channel
108
108
Queue
Assembler 102

Fig. 2a

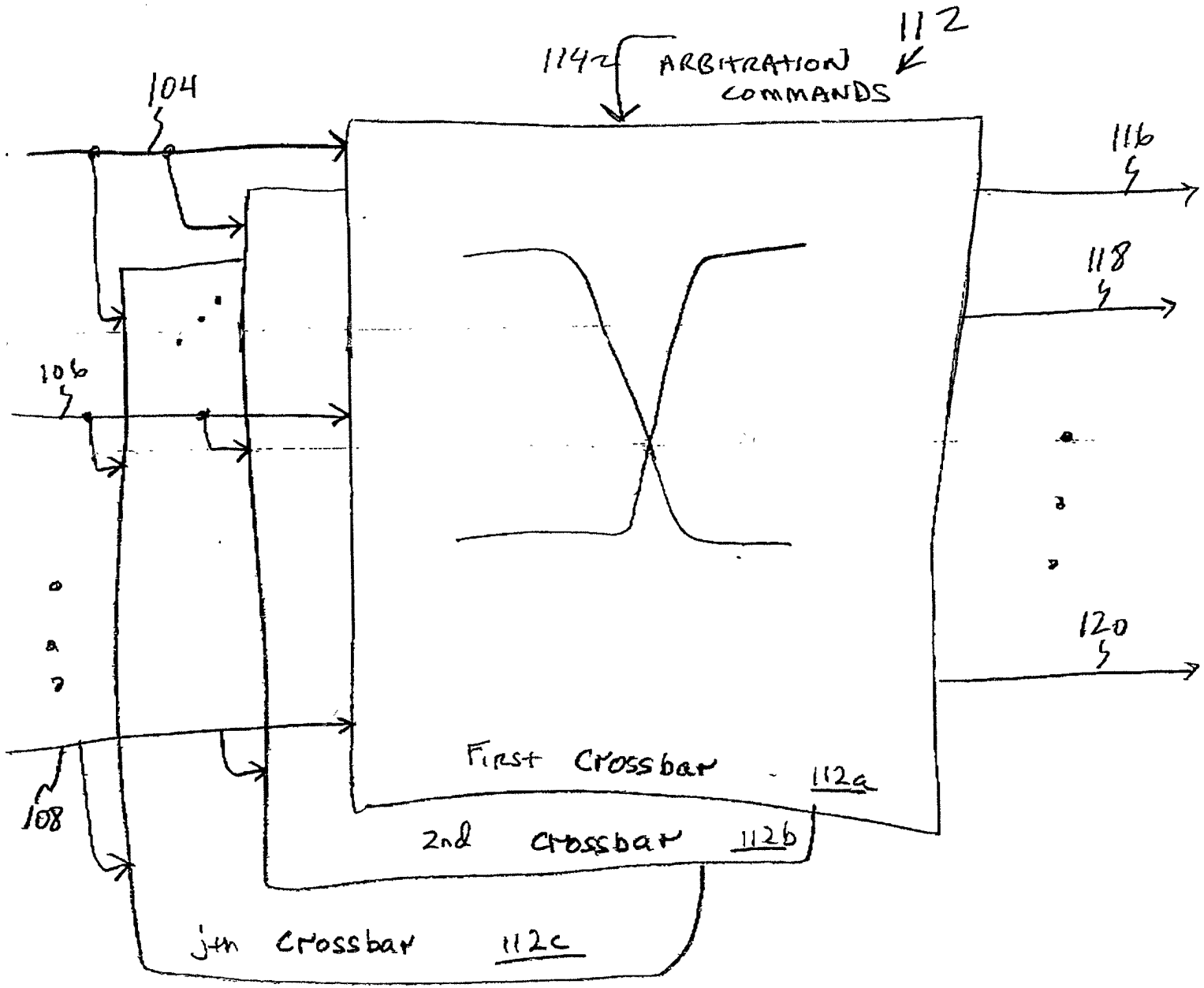

Fig. 2b

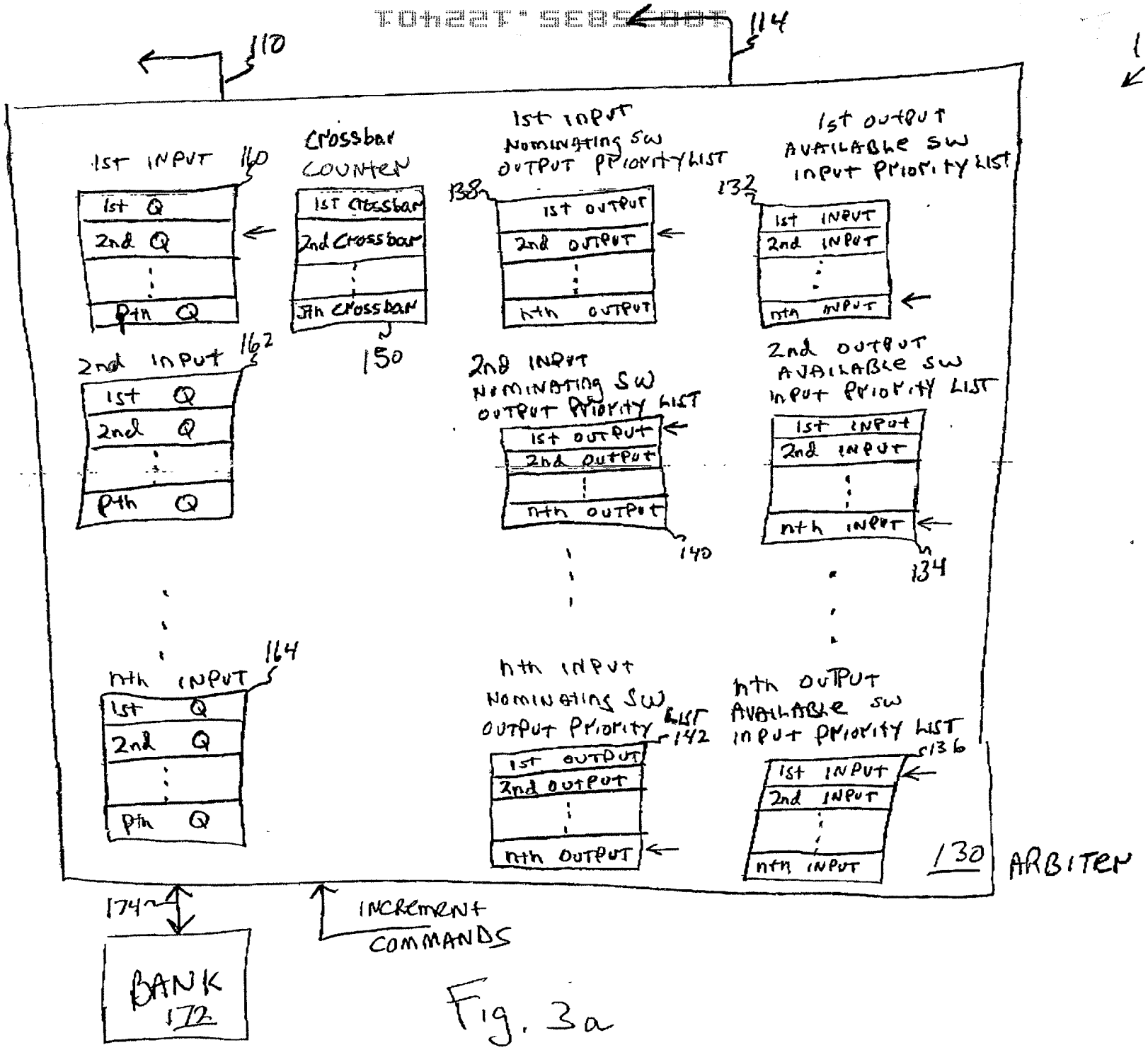
100
110
114
1st INPUT 160
1st Q
2nd Q
pth Q
Crossbar COUNTER
1st Crossbar
2nd Crossbar
Jth Crossbar
150
1st INPUT Nominating SW OUTPUT PRIORITY LIST
138
1st OUTPUT
2nd OUTPUT
nth OUTPUT
1st OUTPUT AVAILABLE SW INPUT PRIORITY LIST
132
1st INPUT
2nd INPUT
nth INPUT
2nd INPUT 162
1st Q
2nd Q
pth Q
2nd INPUT Nominating SW OUTPUT PRIORITY LIST
1st OUTPUT
2nd OUTPUT
nth OUTPUT
140
2nd OUTPUT AVAILABLE SW INPUT PRIORITY LIST
1st INPUT
2nd INPUT
nth INPUT
134
nth INPUT 164
1st Q
2nd Q
pth Q
nth INPUT Nominating SW OUTPUT Priority LIST
142
1st OUTPUT
2nd OUTPUT
nth OUTPUT
nth OUTPUT AVAILABLE SW INPUT PRIORITY LIST
136
1st INPUT
2nd INPUT
nth INPUT
130 ARBITER
174
BANK 172
INCREMENT COMMANDS

Fig. 3a

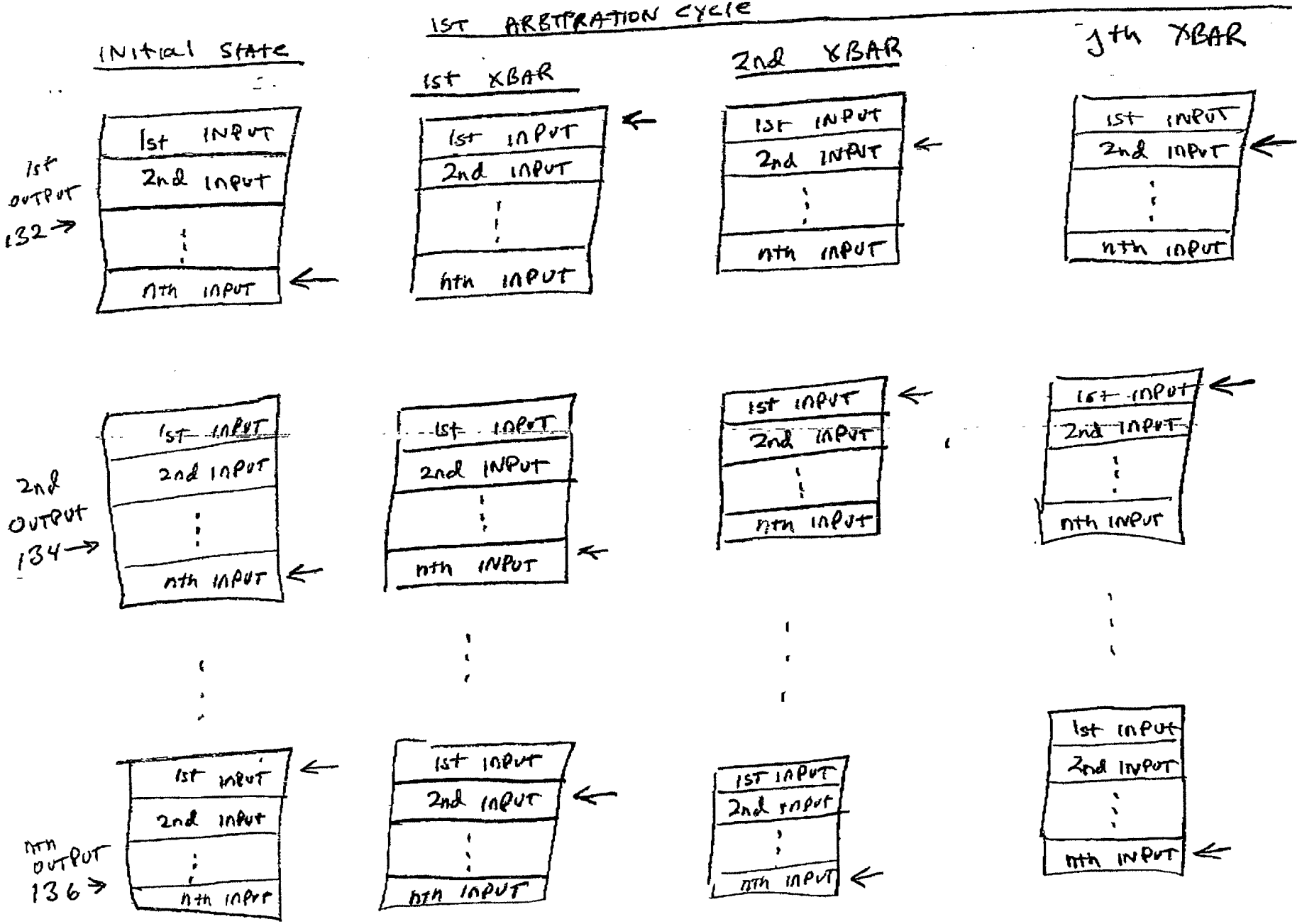
1ST ARBITRATION CYCLE
INITIAL STATE
1ST XBAR
2nd XBAR
jth XBAR
1st INPUT
2nd INPUT
nth INPUT
1st OUTPUT 132
2nd OUTPUT 134
nth OUTPUT 136
AVAILABLE SW INPUT PRIORITY LISTS

Fig. 3b

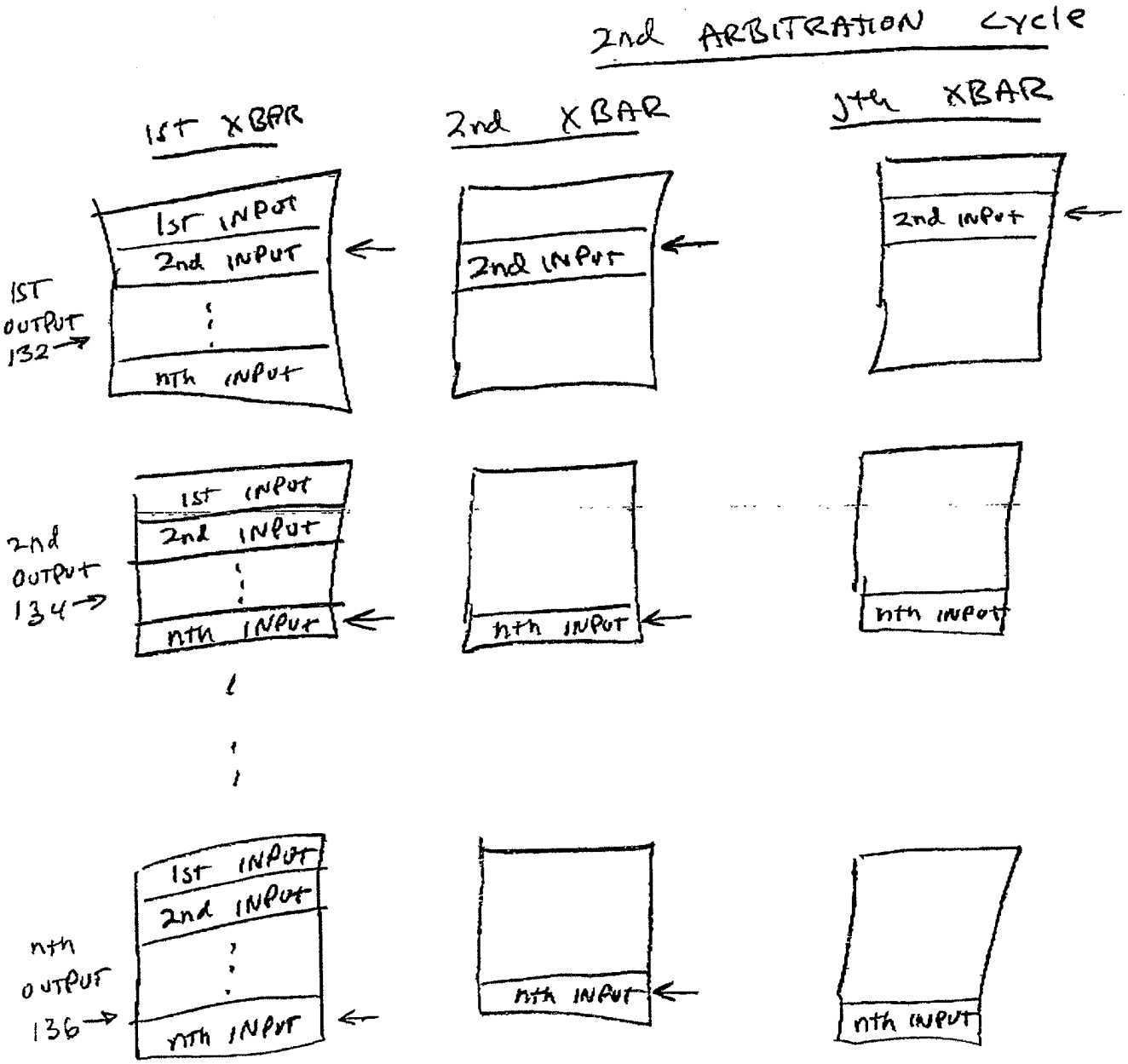
2nd ARBITRATION Cycle
1st XBAR
2nd XBAR
jth XBAR
1st INPUT
2nd INPUT
nth INPUT
1ST OUTPUT 132
2nd OUTPUT 134
nth OUTPUT 136

Fig. 3c

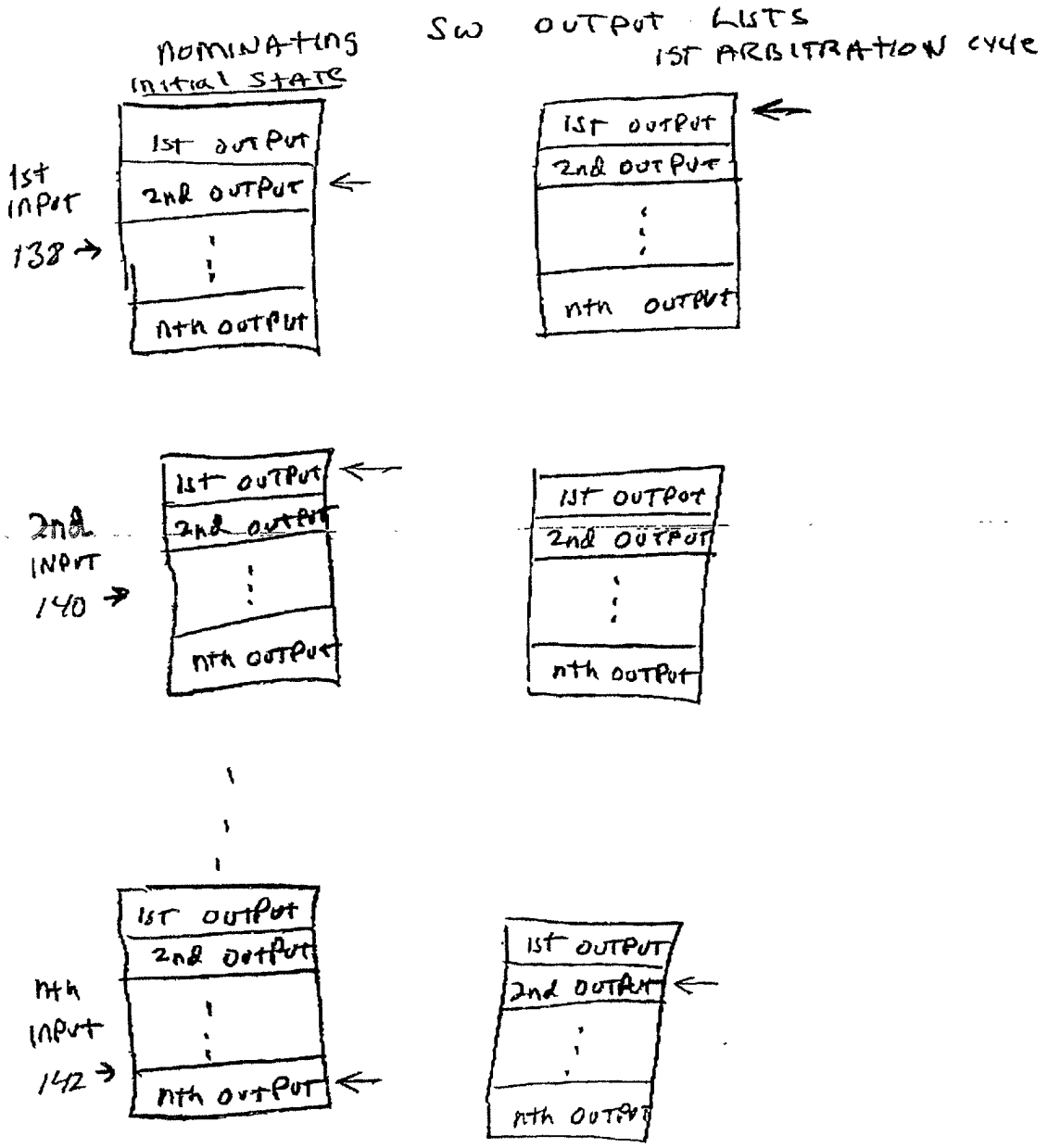
NOMINATING
Initial STATE
SW OUTPUT LISTS
1ST ARBITRATION CYCLE
1st INPUT
138
2nd INPUT
140
nth INPUT
142
1st OUTPUT
2nd OUTPUT
nth OUTPUT

Fig. 3d

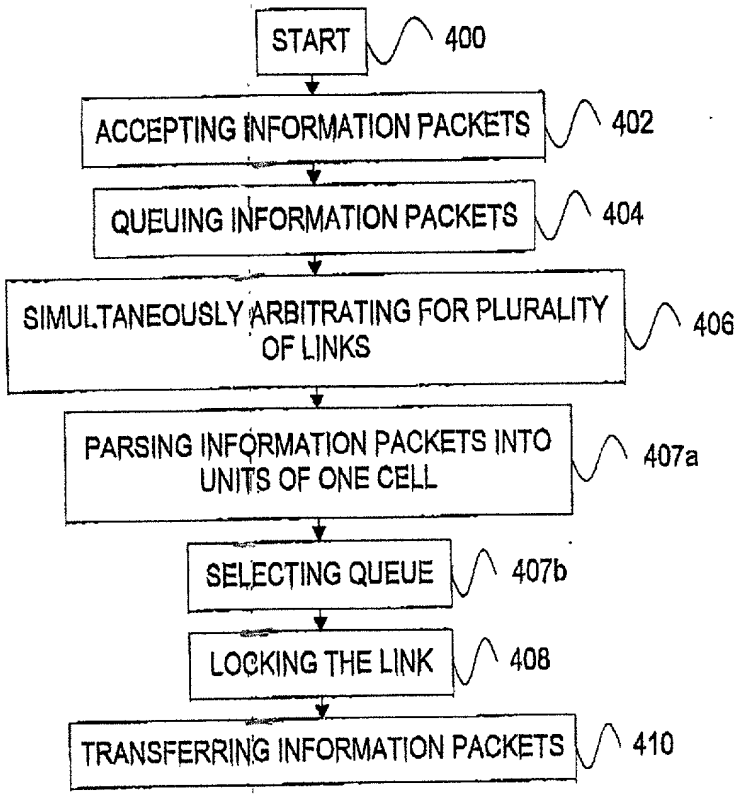
START
400
ACCEPTING INFORMATION PACKETS
402
QUEUING INFORMATION PACKETS
404
SIMULTANEOUSLY ARBITRATING FOR PLURALITY OF LINKS
406
PARSING INFORMATION PACKETS INTO UNITS OF ONE CELL
407a
SELECTING QUEUE
407b
LOCKING THE LINK
408
TRANSFERRING INFORMATION PACKETS
410

FIG. 4

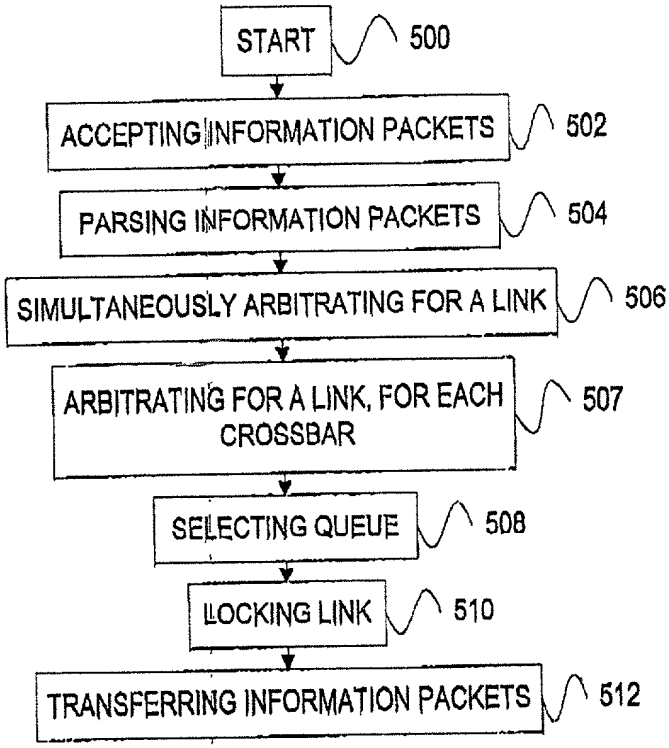
START
500
ACCEPTING INFORMATION PACKETS
502
PARSING INFORMATION PACKETS
504
SIMULTANEOUSLY ARBITRATING FOR A LINK
506
ARBITRATING FOR A LINK, FOR EACH CROSSBAR
507
SELECTING QUEUE
508
LOCKING LINK
510
TRANSFERRING INFORMATION PACKETS
512

FIG. 5

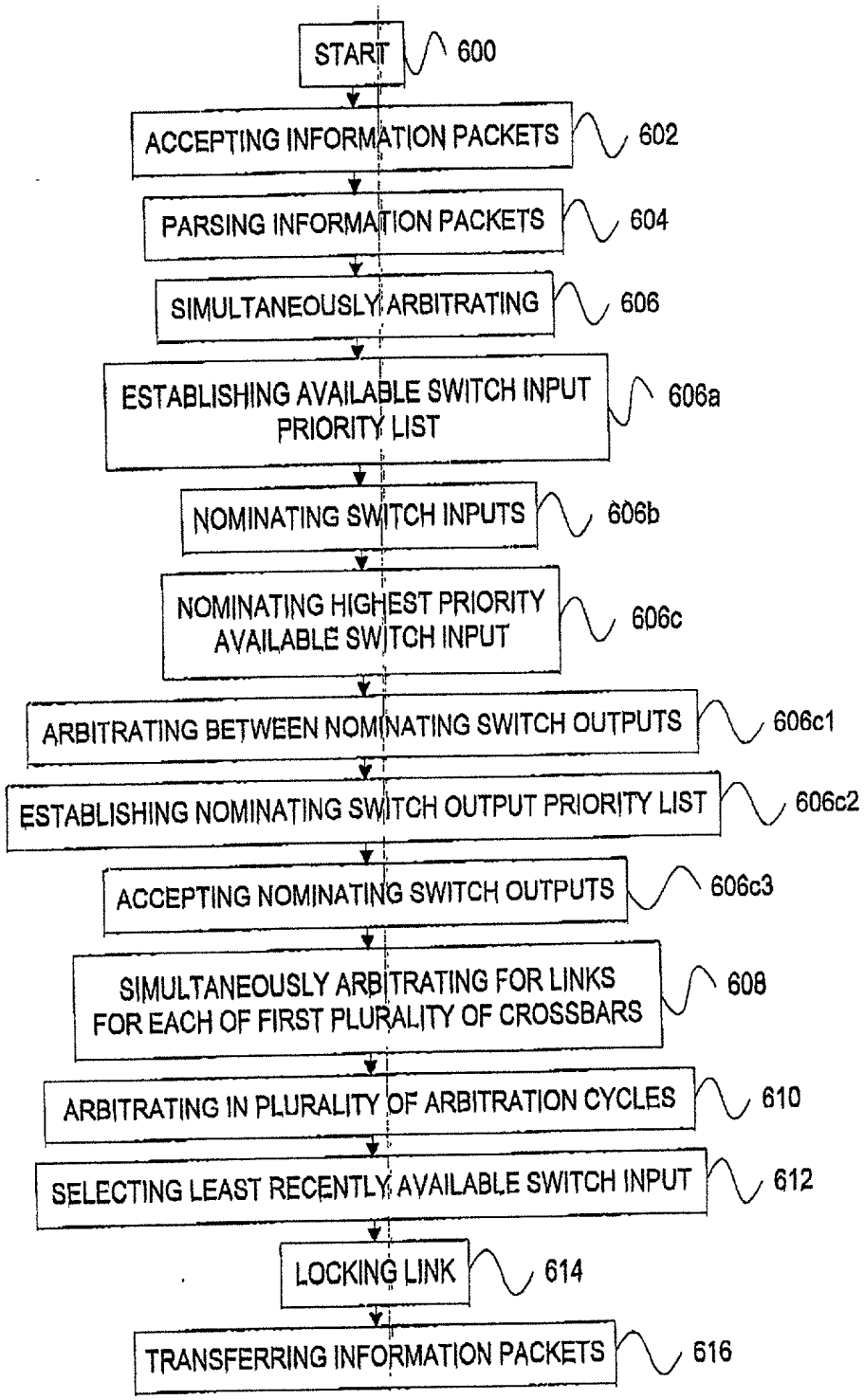
START
600
ACCEPTING INFORMATION PACKETS
602
PARSING INFORMATION PACKETS
604
SIMULTANEOUSLY ARBITRATING
606
ESTABLISHING AVAILABLE SWITCH INPUT PRIORITY LIST
606a
NOMINATING SWITCH INPUTS
606b
NOMINATING HIGHEST PRIORITY AVAILABLE SWITCH INPUT
606c
ARBITRATING BETWEEN NOMINATING SWITCH OUTPUTS
606c1
ESTABLISHING NOMINATING SWITCH OUTPUT PRIORITY LIST
606c2
ACCEPTING NOMINATING SWITCH OUTPUTS
606c3
SIMULTANEOUSLY ARBITRATING FOR LINKS FOR EACH OF FIRST PLURALITY OF CROSSBARS
608
ARBITRATING IN PLURALITY OF ARBITRATION CYCLES
610
SELECTING LEAST RECENTLY AVAILABLE SWITCH INPUT
612
LOCKING LINK
614
TRANSFERRING INFORMATION PACKETS
616

FIG. 6

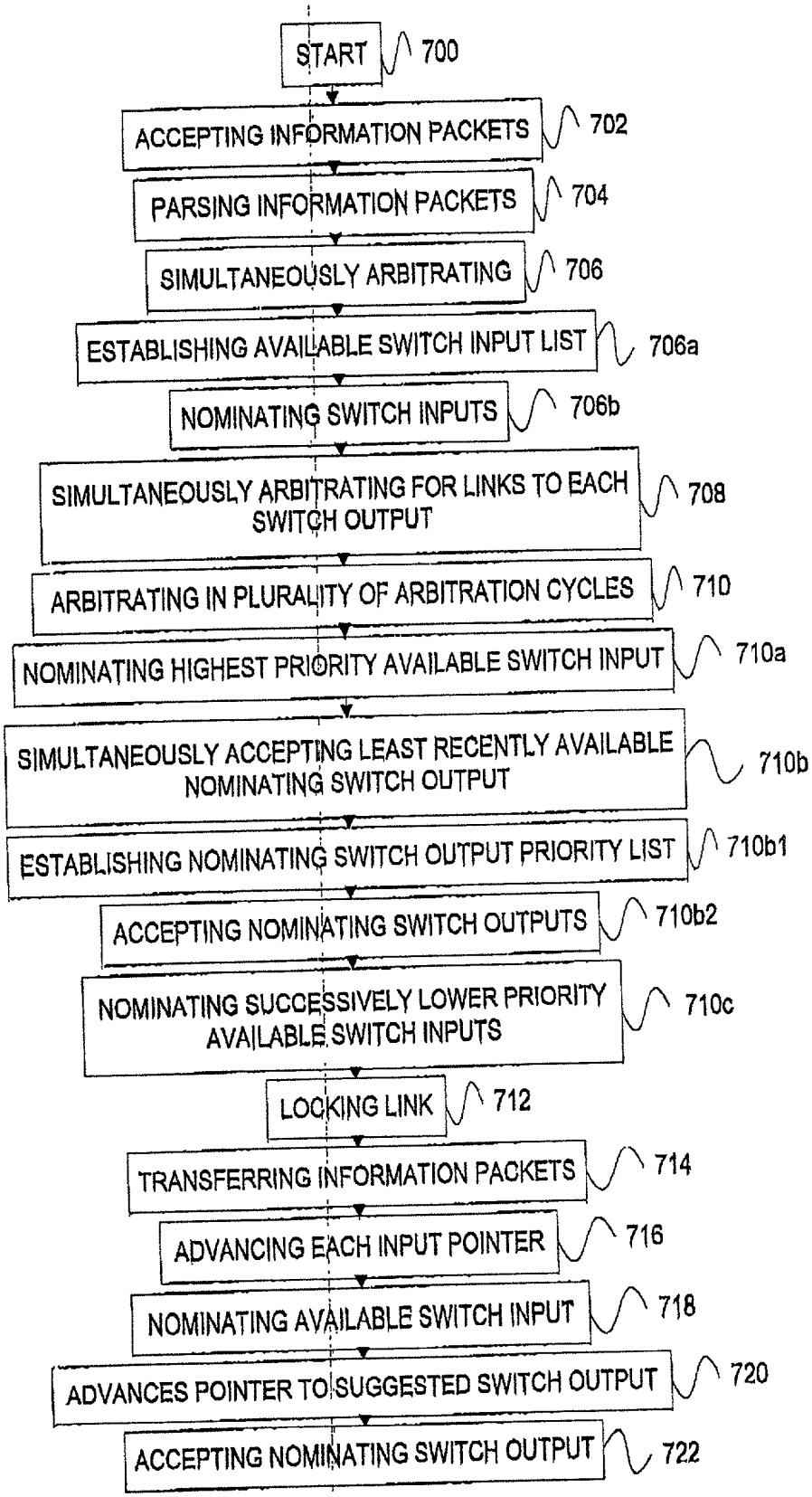
START
700
ACCEPTING INFORMATION PACKETS
702
PARSING INFORMATION PACKETS
704
SIMULTANEOUSLY ARBITRATING
706
ESTABLISHING AVAILABLE SWITCH INPUT LIST
706a
NOMINATING SWITCH INPUTS
706b
SIMULTANEOUSLY ARBITRATING FOR LINKS TO EACH SWITCH OUTPUT
708
ARBITRATING IN PLURALITY OF ARBITRATION CYCLES
710
NOMINATING HIGHEST PRIORITY AVAILABLE SWITCH INPUT
710a
SIMULTANEOUSLY ACCEPTING LEAST RECENTLY AVAILABLE NOMINATING SWITCH OUTPUT
710b
ESTABLISHING NOMINATING SWITCH OUTPUT PRIORITY LIST
710b1
ACCEPTING NOMINATING SWITCH OUTPUTS
710b2
NOMINATING SUCCESSIVELY LOWER PRIORITY AVAILABLE SWITCH INPUTS
710c
LOCKING LINK
712
TRANSFERRING INFORMATION PACKETS
714
ADVANCING EACH INPUT POINTER
716
NOMINATING AVAILABLE SWITCH INPUT
718
ADVANCES POINTER TO SUGGESTED SWITCH OUTPUT
720
ACCEPTING NOMINATING SWITCH OUTPUT
722

FIG. 7

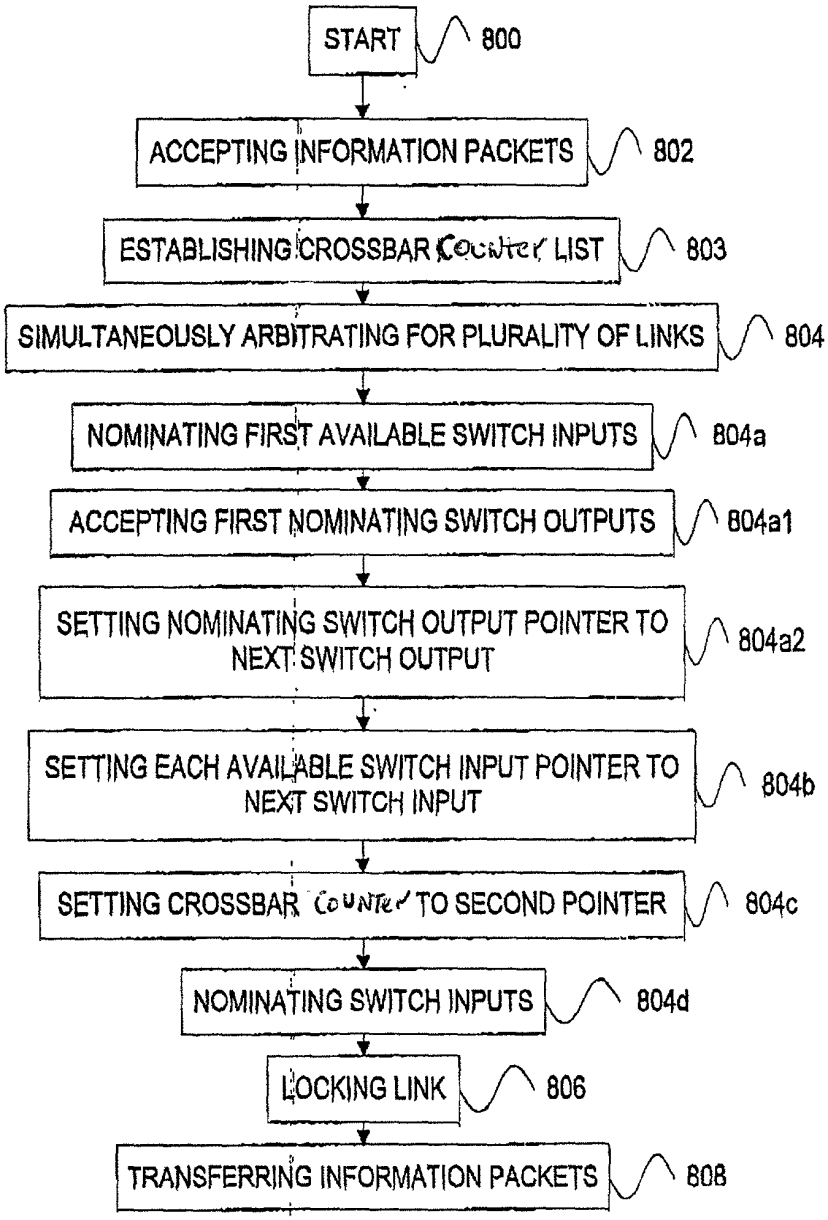
START
800
ACCEPTING INFORMATION PACKETS
802
ESTABLISHING CROSSBAR Counter LIST
803
SIMULTANEOUSLY ARBITRATING FOR PLURALITY OF LINKS
804
NOMINATING FIRST AVAILABLE SWITCH INPUTS
804a
ACCEPTING FIRST NOMINATING SWITCH OUTPUTS
804a1
SETTING NOMINATING SWITCH OUTPUT POINTER TO NEXT SWITCH OUTPUT
804a2
SETTING EACH AVAILABLE SWITCH INPUT POINTER TO NEXT SWITCH INPUT
804b
SETTING CROSSBAR Counter TO SECOND POINTER
804c
NOMINATING SWITCH INPUTS
804d
LOCKING LINK
806
TRANSFERRING INFORMATION PACKETS
808

FIG. 8

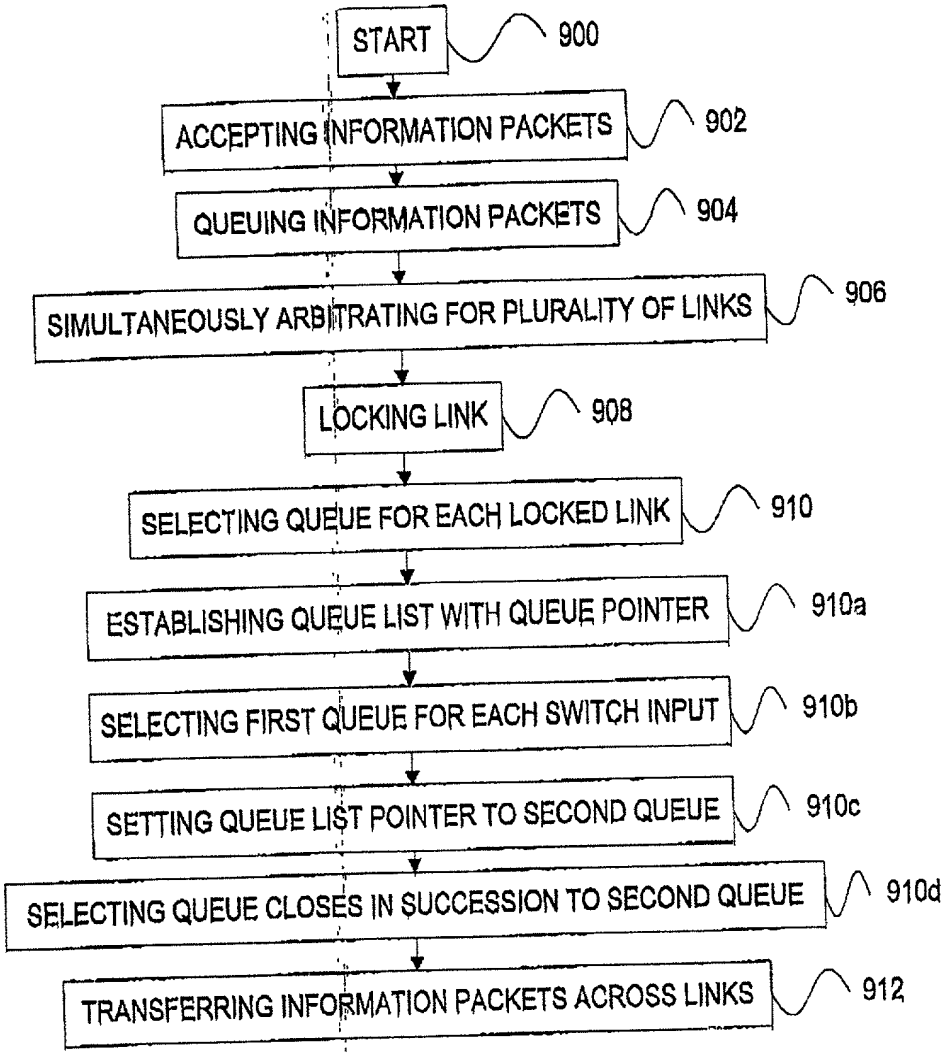
START
900
ACCEPTING INFORMATION PACKETS
902
QUEUING INFORMATION PACKETS
904
SIMULTANEOUSLY ARBITRATING FOR PLURALITY OF LINKS
906
LOCKING LINK
908
SELECTING QUEUE FOR EACH LOCKED LINK
910
ESTABLISHING QUEUE LIST WITH QUEUE POINTER
910a
SELECTING FIRST QUEUE FOR EACH SWITCH INPUT
910b
SETTING QUEUE LIST POINTER TO SECOND QUEUE
910c
SELECTING QUEUE CLOSES IN SUCCESSION TO SECOND QUEUE
910d
TRANSFERRING INFORMATION PACKETS ACROSS LINKS
912

FIG. 9

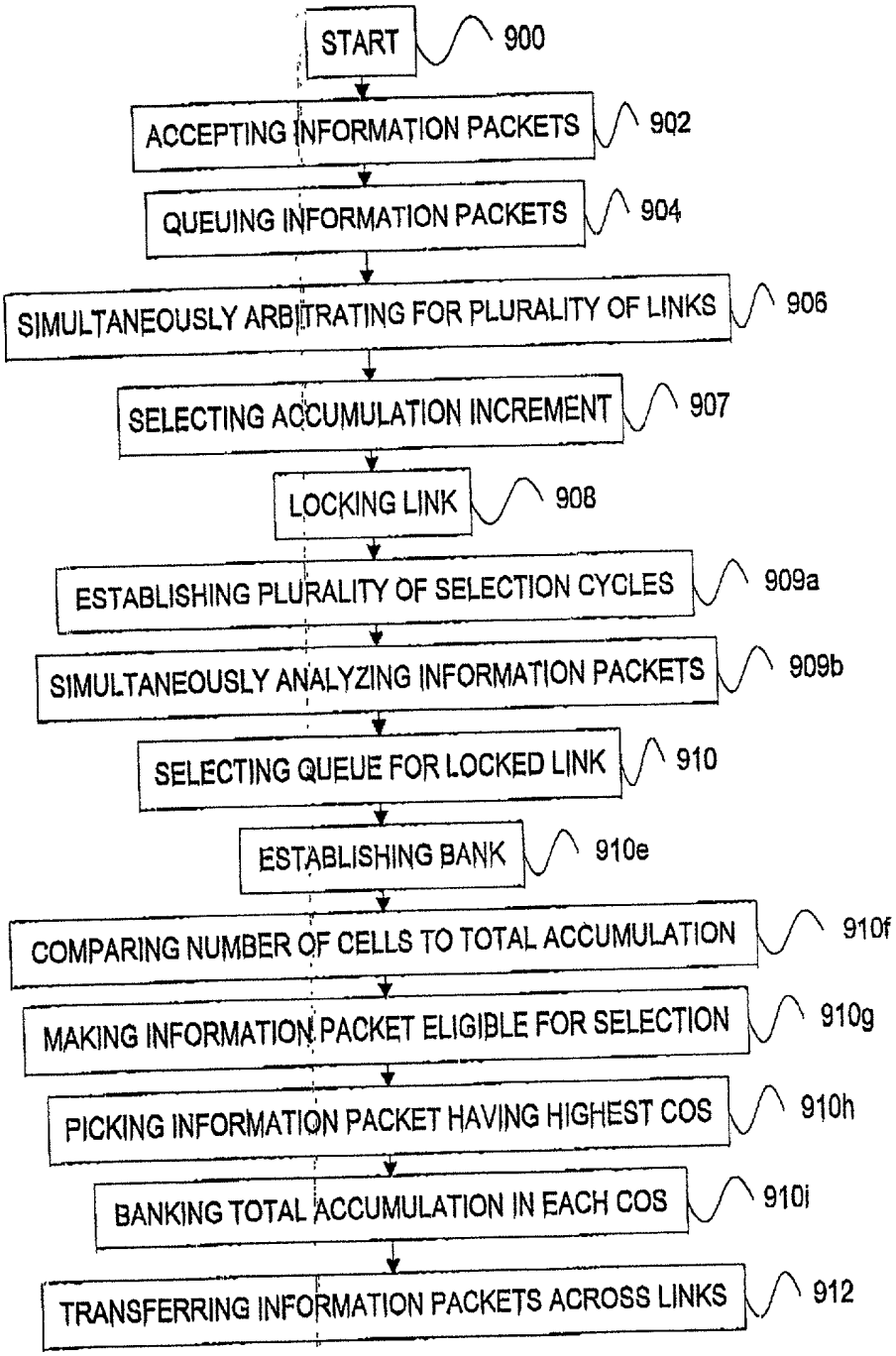
START
900
ACCEPTING INFORMATION PACKETS
902
QUEUING INFORMATION PACKETS
904
SIMULTANEOUSLY ARBITRATING FOR PLURALITY OF LINKS
906
SELECTING ACCUMULATION INCREMENT
907
LOCKING LINK
908
ESTABLISHING PLURALITY OF SELECTION CYCLES
909a
SIMULTANEOUSLY ANALYZING INFORMATION PACKETS
909b
SELECTING QUEUE FOR LOCKED LINK
910
ESTABLISHING BANK
910e
COMPARING NUMBER OF CELLS TO TOTAL ACCUMULATION
910f
MAKING INFORMATION PACKET ELIGIBLE FOR SELECTION
910g
PICKING INFORMATION PACKET HAVING HIGHEST COS
910h
BANKING TOTAL ACCUMULATION IN EACH COS
910i
TRANSFERRING INFORMATION PACKETS ACROSS LINKS
912

FIG. 10

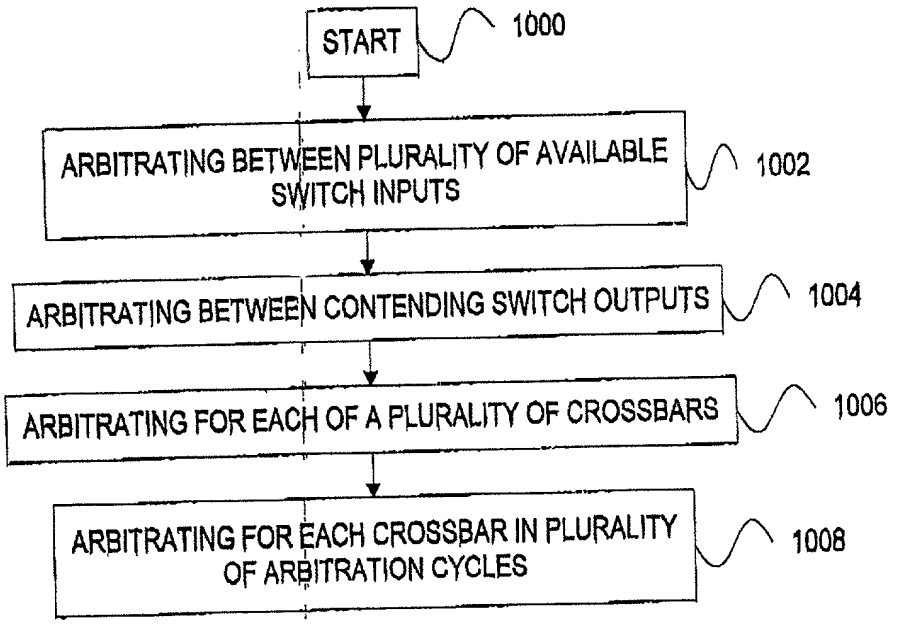
START
1000
ARBITRATING BETWEEN PLURALITY OF AVAILABLE SWITCH INPUTS
1002
ARBITRATING BETWEEN CONTENDING SWITCH OUTPUTS
1004
ARBITRATING FOR EACH OF A PLURALITY OF CROSSBARS
1006
ARBITRATING FOR EACH CROSSBAR IN PLURALITY OF ARBITRATION CYCLES
1008

FIG. 1